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1. K-12: Correction re SECO course credits

http://www.secoonline.org/reg_form-06.pdf

When you come to the SECO conference in Dayton, you will be able to enroll for one credit of graduate credit (through the University of Cincinnati) for each short course you take (which would include attending workshops, follow-up in your classroom, and completing a follow-up report). You can get one credit for attending at least 5 sessions in the same strand (which has no follow-up report requirement). If you are able to enroll in more than one short course or attend 5 sessions in more than one strand, you can add additional credits.

Remember that the early-bird registration deadline (12/6/06) is approaching; help the conference committee finalize plans for the number of attendees by sending in your registration now!

2. K-12: Moon Phases, Ecosystems, and Atomic Structure Resources from ORC

Elementary Earth Science: Moon Phases

http://ohiorc.org/bookmark/view_a_folder.aspx?mid=148963464&folderID=634

The resources in this mini-collection include lessons and activities related to the phases of the moon. Two promising practice lessons offer strategies for collecting moon data over time. An interactive content resource challenges students to "fill in the blanks" in a lunar cycle by dragging the correct image of the moon to the blank cells in the lunar cycle.

Middle School Life Science: Energy in an Ecosystem

http://ohiorc.org/bookmark/view_a_folder.aspx?mid=148986945&folderID=634

Two lessons and two assessment items make up this mini-collection for middle school life science. One lesson addresses aquatic ecosystems, the other predator/prey relationships. Two NAEP assessment items round out the collection.

High School Physical Science: Atomic Structure

http://ohiorc.org/bookmark/view_a_folder.aspx?mid=149010426&folderID=634

Description: This mini-collection includes one lesson and three content resources focusing on atomic structure. Through these resources students explore isotopes, build an atom, and review the history of atomic discovery.

3. K-12: the Environmental Education Council of Ohio (EECO) conference proposals due

<http://www.eeco-online.org/>

The 40th Annual EECO Conference, with the theme: A Golden Guide to a Healthy Planet, will be held at the Aullwood Audubon Center & Farm in Dayton, Ohio, April 26-29, 2007. Proposals to present at the conference are due by November 30, 2006, and may be submitted to Tom Hissong (thissong@audubon.org). Sessions may be 1 or 2 hours in length, may be planned for inside, outside, or both, and should be appropriate for individuals from agencies, organizations, and institutions interested in advancing environmental education in Ohio. Get more information on the conference strands at the web site, but don't delay: send your proposals in today!

4. K-12: U.S. public schools to receive free weather radios

<http://public-alert-radio.nws.noaa.gov/>

More than 97,000 public alert radios are being delivered to the nation's public schools, paid for by the federal government. The radio broadcasts include National Weather Service warnings, watches and forecasts, as well as alerts on safety issues such as chemical spills or missing and abducted children (Amber Alerts). Packaged radios will include written instructions on programming the radios and registration that is required before using the devices.

The project is a joint initiative of the U.S. Department of Education, the Department of Commerce's National Oceanic and Atmospheric Administration, and the Department of Homeland Security. For additional information about programming and registering the weather radios, visit the web site or contact Sara Strizzi at (303) 346-0924 or sara.strizzi@ed.gov.

5. K-12: Department of Energy Program - Academies Creating Teacher Scientists.

<http://www.scied.science.doe.gov/scied/LSTPD/about.htm>

The Department of Energy Academies Creating Teacher Scientists (DOE ACTS) program is designed by the Office of Science to create a cadre of outstanding science and math teachers with the proper content knowledge and scientific research experience to serve as leaders and agents of positive change in their local and regional teaching communities. This*three-year* program will use the unmatched wealth of mentoring talent at the DOE National Laboratories to guide and enrich the teachers' understanding of the scientific and technological world. Through this program, teachers will establish long-term relationships with their mentor scientists and teaching colleagues who will continue to support the educational efforts of the teachers when they have returned to their classrooms.

What is Expected of Each Teacher

Every participant is required to:

* Complete the required time commitment for the three year program at a DOE National laboratory (which is at least 4 weeks per year).

- * Complete required deliverables specified by the program which may include: an electronic portfolio, research papers, poster presentations, pre- and post-surveys, and pre- and post-tests.
- * Attend all scheduled events including lectures, tours and group activities while at the lab.
- * Participate in a national electronic forum of LSTPD teachers during the academic year.
- * Present the results of their work at appropriate professional conferences, such as NSTA or NCTM conferences

6. K-12: Research Experiences for Teachers (RET) in sunny Florida, summer 2007

<http://www.education.magnet.fsu.edu>

Spend 6 weeks of your summer doing science research in Florida; each teacher accepted by the program will receive a stipend, classroom materials and, if necessary, travel support and housing. The application for the 2007 Research Experiences for Teachers program is now available online, and is due by March 1, 2007.

Funded by the National Science Foundation, this six-week summer residential program gives K-12 teachers from across the country the chance to participate in real-world science and cutting-edge magnetic field research. Through weekly seminars, discussion groups, professional development and technology workshops, teachers develop strategies and resources to translate the experience into material for their classrooms.

Teachers are expected to implement their science research in their classrooms, and share what they have learned with others.

7. K-12: ARMADA Project- Research and Mentoring Experiences for Teachers

<http://www.armadaproject.org>

The University of Rhode Island's Office of Marine Programs is now accepting applications for the ARMADA Project- Research and Mentoring Experiences for Teachers. The ARMADA Project provides K-12 teachers an opportunity to actively participate in ocean, polar, and environmental science research and peer mentoring. **Application deadline is February 5, 2007**

Selected Master Teachers (with five or more years teaching experience) are paired with leading scientists and participate in shipboard, field, or laboratory research with all expenses paid. Research experiences will take place during the summer, although there may be opportunities during the school year. Upon completion of their research experience, Master Teachers develop ways to bring the fruits of their research experiences, including scientific data, methodologies, and technology into their classrooms. They share their experiences by mentoring new teachers in their school district and by presenting their results at the National Science Teachers Association National Conventions.

The ARMADA Project has involved teachers in research experiences all over the world. Past experiences include taking part in the largest North Pacific humpback whale study in the waters off the coast of Alaska, investigating the impacts of global change in the Arctic Ocean, monitoring and assessing tidal creeks in South Carolina, studying the impact of human activity on dusky dolphins in New Zealand, exploring the seafloor off the coast of Sumatra to better understand the forces that lead to the 2004 Asian tsunami, water circulation studies in the Norwegian Sea, and a variety of ecosystem monitoring projects in the Bay of Fundy,

Narragansett Bay, Gulf of Maine, Stellwagen Bank, Western Shelf of Florida, Sargasso Sea, Bahamas, Alaska, and Block Island Sound.

For more information beyond what is available on the ARMADA Project website contact Andrea Kecskes at 401-874-6211 or armada@gso.uri.edu.

8. K-12: PODCASTS: Science Misconceptions

<http://www.ocde.k12.ca.us/sciencek12/Podcasts.html>

These Podcasts come from California, and are created by Michael Horton, of the Orange County Department of Education. The first series is on science misconceptions, which are pervasive amongst students and may block them from learning the correct explanation for the phenomenon. The collection grows by one or two podcasts a week so check back frequently.

Podcasts are available for the following misconceptions:

- 1) "The primary colors are red, yellow, and blue."
- 2) "The seasons are caused by the highly elliptical orbit of the earth." and "Earth's orbit is highly elliptical."
- 3) "Atoms get larger when you heat them."
- 4) "Oxygen-rich blood is red, oxygen-deprived blood is blue."
- 5) "The material to make a tree comes from the ground."
- 6) "Battery acid leaks out of old batteries."
- 7) "Burning a candle is endothermic because you have to light it."
- 8) "Fish breathe the "O" from the H₂O"
- 9) "Race cars have wide tires because they provide more friction."
- 10) "You can cool a room by opening the refrigerator door."
- 11) "Sound waves are transverse, I've seen them on screen."
- 12) "Pluto is not a planet."
- 13) "The oxygen that we breathe comes from rain forests."
- 14) "Oil and water repel each other."
- 15) "I have seen pictures of the milky way galaxy."
- 16) "Air friction slows your car down on the freeway."
- 17) "40 degrees C is twice as hot as 20 degrees C."

(Note: For great videos about science misconceptions, go to <http://www.learner.org> and view the two series, A Private Universe and Minds of Our Own. Also note: Misconception Podcast #12 isn't so far off after all!)

9. K-12: Join Speak Up 2006

<http://www.netday.org/speakup> and http://www.netday.org/SPEAKUP/speak_up_how_to.htm

NetDay Speak Up is a national online research project to collect and report on views of K-12 students, teachers and parents about science, math, technology and 21st century education. Over the past three years, the annual online survey event has collected the views and ideas of over 562,000 K-12 students and over 26,000 teachers representing 7,000 schools from all 50 states, the District of Columbia, Puerto Rico and American schools on US military bases worldwide.

The Speak Up data represents the largest compilation of authentic, unfiltered stakeholder input on education and technology and is used regularly by education, business and policy leaders to inform federal, state and local programs on education. Every school that participates in the Speak Up surveys gains exclusive access to their own aggregated student and teacher data to drive technology budgeting and purchasing, curriculum planning, teacher training and community outreach activities.

Speak Up 2006 surveys will be open starting November 1 and will remain open for student, teacher and parent input for approximately one month. One adult must register your school or district for participation; registration is now open. (If you do not know if your school is registered, click on the "Register Your School" button and enter your school name. If your school is NOT registered, visit our How-to Guide to find out how to get your school registered.)

This year's survey will follow up on many of the technology issues addressed in the previous student and teacher surveys and address new and ongoing hot topics in education. Speak Up 2006 major themes address:

- * Opportunities and impact of technology on learning
- * Communications, self expression and social networking
- * Global Awareness and international collaborations
- * Science, math, national competitiveness, and workforce development
- * Schools of the future

10. Gr 4-7: Free Energy Fairs and Workshops from the Ohio Energy Projects

<http://www.ohioenergy.org/home.htm>

Energy Fairs and Workshops are FREE programs offered by the Ohio Energy Projects for teachers and students of grades 4-7. These one-day programs provide hands-on activities for teaching the sources of energy, energy transformations, electricity and energy efficiency. For more information or to register on-line, visit the OEP website at www.ohioenergy.org.

Energy Fair Dates and Locations

(One teacher and up to 30 students)

November 30	Southern Ohio	Shawnee State University
December 5	Southwest Ohio	Cincinnati Museum Center
December 14	Central Ohio	Otterbein College
January 30	Western Ohio	Tipp City

Energy Workshop Dates and Locations

(One teacher and six students)

November 2	Zanesville	ZSC/OUZ Campus Center
January 11	Akron	University of Akron
January 12	Cleveland	Great Lakes Science Center
January 23	Athens	Ohio University
January 26	Northwest Ohio	Bowling Green State University

11. Gr 5-8: A new Competition: Bubble Wrap for Young Inventors

<http://nmoe.org/bubblewrap>

Sealed Air Corporation, the creator of Bubble Wrap® brand cushioning, is sponsoring the first ever Bubble Wrap® Competition for Young Inventors. The competition encourages students in grades 5 through 8 throughout the United States to demonstrate their creativity and ingenuity by creating an invention that incorporates the use of Bubble Wrap® cushioning.

Three finalists will win a three-day trip to New York City, where the Grand Prize Winner will be announced on Bubble Wrap® Appreciation Day, January 29, 2007. In addition, the Grand Prize Winner will receive a \$10,000 savings bond, while the 2nd and 3rd place winners will receive \$5,000 and \$3,000 respectively in savings bonds. The deadline for entries is December 8, 2006.

12. Gr 5-12: Teaching Science: How to Really Give Universal Access to English Learners

<http://www.schoolsmovingup.net/onlineevents>

WestEd's SchoolsMovingUp will feature another free Online Event on Thursday, November 30 from 10:30 a.m. - 12:00 p.m. Pacific Time (1:30 p.m. - 3:00 p.m. Eastern Time).

This interactive presentation (a combined PowerPoint presentation and conference call) will address practical, powerful ways to differentiate science instruction for English Learners. Many science teachers know about the 5 Es (Engage, Explore, Explain, Elaborate, Evaluate) of inquiry-based instruction and teaching tools such as graphic organizers, but they want to know how to extend these strategies to reach and teach English Learners. John Carr and Ursula Sexton, Senior Research Associates at WestEd will lead participants through slides, examples, and opportunities for questions and comments. It's all about engaging students through hands-on activities, showing while speaking, and supportive writing so students learn to think and communicate as real scientists do.

To sign up for this event, please visit

<http://www.schoolsmovingup.net/events/qualityliteracyinstruction> and select "Sign Up."

If you are unable to participate in the live event, you may view an archive, which will be available beginning the day after the event.

13. Gr 6-12: SEPUP workshop, Investigating Food Safety

Another great SEPUP workshop has been scheduled for December 2 on Saturday, December 2nd, from 8:00am-2:30pm @ Cincinnati State Technical and Community College.

The registration fee is \$25.00 per registrant, but you'll receive a complete SEPUP Kit valued at \$469, free continental breakfast & lunch, and hands-on experience with each of the SEPUP Module activities. It's a great deal; register before the deadline (November 22, 2006) to save a seat. Furthermore, upon completion of the one-day SEPUP training program you will receive 6 CEUs!

The workshop will address consumers' concerns over food safety (ranging from worries over the possibility of Salmonella poisoning to E-coli or pesticide residues on produce). At the workshop you will to explore food-borne illness, investigate the growth of yeast, examine the different uses

of chemical additives, and learn how they are used to prevent microbial growth. You will explore how chemical additives can be used to slow the oxidation of fresh fruit and to enhance the nutrient content of foods, and how foods can be tested for the presence of chemical residues, such as pesticides. Finally, you will evaluate the use of different food preservation techniques, which are intended to improve food safety. At the end of the day you will be ready to engage your students in these investigations, and more! Be sure to get this on your schedule, and send your registration in right away! (The registration form is available on the BaP Ohio web site!) Or, for more information, contact the Cincinnati SEPUP Coordinator, Martha Brosz by email or phone: martha.brosz@cincinnatiastate.edu or 513/569-1710.

14. Gr 7-12: Experiment with Light: Make your own Double-Slit Diffraction Grating

http://www.arborsci.com/Products_Pages/Lasers/LasersBuy1.htm#DoubleSlit

With just a Laser Pointer and a Laser Printer, each of your students can now generate their own double-slit patterns -- and it's FREE! This idea came from Rex Rice, and the graphics were developed by Mark Schober.

Here's all you have to do:

1. Download the Double-slit file.
2. Open the file with Adobe Acrobat Reader.
3. Using a laser printer, print the file directly onto a transparency. The file contains 9 sets of 8 slits, which can be cut apart and distributed to students for their investigations.
4. Shine any laser (even an inexpensive laser pointer) through the slits and observe the diffraction pattern.
5. This is an easy way to determine the wavelength of your laser, using the double slit formula.

15. Gr 9-12: IGES Announces 2007 Thacher Scholars Award

<http://www.strategies.org/ThacherScholars>

Note: Entries must be postmarked by April 2, 2007

Satellite observations of the Earth have numerous uses in science research, ranging from climate prediction to archaeology. They can improve human understanding of the Earth system, including interactions among the atmosphere, biosphere, geosphere and hydrosphere. And they can improve quality of life by supporting weather prediction, natural hazards monitoring, transportation, land-use planning, agriculture, coastal management, public health and emergency response.

In an effort to engage the next generation of scientists in the use of geospatial technology to study the environment, the Institute for Global Environmental Strategies (IGES) is now accepting entries for the 2007 Thacher Scholars Award, to be given to secondary school students designing and conducting the best projects using satellite observations of the Earth, also known as remote sensing.

The Thacher Scholars Award, previously known as the Thacher Scholarship, was founded in honor of former IGES board member Peter S. Thacher, an internationally recognized leader in promoting the use of satellite remote sensing. During a distinguished career, he served as deputy

director of the United Nations Environment Program, as an advisor to NASA and, at the time of his death in 1999, as president of the Earth Council Foundation-U.S.

U.S. students in grades 9-12, including U.S. citizens attending schools in foreign countries, are eligible to receive cash awards in the amount of \$2,000 for first place, \$1,000 for second place and \$500 for third place. For each winning student, a teacher or designated adult coach will receive a \$200 gift card to Amazon.com.

Entries must be postmarked by April 2, 2007, and will be judged by IGES staff based on their scientific and technical accuracy; creativity and originality; quality of presentation; thoroughness of research, methods and procedures; and demonstration of knowledge gained. Winners will be announced by May 2, 2007.